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USING DICTATION SOFTWARE
IN MEDICAL PRACTICES

This guide was created in partnership between Doctors Technology Office and the College of Physicians and Surgeons of British Columbia's Physician Practice Enhancement Program to aid practising physicians in adopting dictation software. Improved medical documentation quality, detail, accuracy and consistency, and perceived medical record completeness, have all been documented as improved outcomes when using dictation software. For practices that are exploring the use of dictation software, it is recommended to develop an implementation plan prior to or during the dictation vendor engagement process as this has shown to improve the transition process. Once dictation software is implemented, it is essential to commit to ongoing continuous improvement to obtain the most benefit from the product.

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Introduction

Given the need to optimize patient care and improve communication for team-based care, clinicians must explore new ways to more efficiently and effectively document their intellectual footprint and clinical plan. It is for these, and medicolegal reasons, that the College's Physician Practice Enhancement Program (PPEP) developed the Unified Medical Record for the Family Physician/General Practitioner assessment standard to provide guidance on best practices in medical documentation.

This guide is for family physicians already using EMRs who are looking to implement dictation software at their medical practice. We will review the benefits of dictation software, highlight the best practices which can be used to plan the implementation of dictation software, review vendor engagement and what can be expected from vendors, and consider the post-implementation process of continuous improvement.

Benefits of Dictation Software

As dictation software becomes more widely studied and used, research has begun to highlight the benefits of using dictation in medical practices to improve the quality of documents created. Some research into the use of dictation has raised concerns over errors and increased time to complete documentation[i,ii], but a substantive amount of research indicates that using dictation software reduces errors, text corrections, and improves efficiency[iii,iv,v,vi] compared to documents and records created by keyboard and mouse only. Moreover, when compared to only manual entry by keyboard and mouse, dictation software can lead to more detailed and accurate records[vii]; more concise documentation[viii]; the perception the medical record is more complete[ix]; and an improvement in the time it takes to complete documentation[x,xi]. While there is a learning curve, physicians have found there is an overall improvement in efficiency and a reduction in errors when using dictation in addition to a keyboard and mouse after completing their implementation[xii,xiii,xiv,xv].

In research which considered physician satisfaction, it was noted that the physicians self-reported a more positive experience using dictation software as opposed to a keyboard and mouse only[xvi,xvii]. Despite the upfront cost of dictation software (on average, $1000-1500 per user, per year, excluding implementation costs), the long-term outcome is that of cost savings[xviii], as a physician is ultimately able to see more patients due to the increased efficiency resulting from the use of dictation software[xix].

As a Family Physician in B.C. and long-time dictation user, Dr Daniel Ngui provides some lessons learnt from his experience using dictation software:

- On implementation: "having a trainer to guide you along the way to ensure you get it right is really worth it" and "if you think about it, using dictation every day in practice means you should invest in the best possible software and hardware to make your life more efficient, and so you can do a better job in patient care and communication with your health care team";

- On training: "once a year, it's good to consider learning a new skill, trick, or have a physician meeting group to share best practices";

- On how to use dictation: "everyone has a different way of using it, it is all about finding your most effective way. Some people dictate with patients in the room, some people after, and some before- it's something you need to try out for yourself".

Types of Dictation Software

There are three primary types of dictation software available. While most offerings will be Front End Speech Recognition (FESR), the below table will provide details on the options available to you.

	DICTATION PROCESS	SPEED	COST
Front End Speech Recognition (FESR)	Text automatically created in electronic medical record (EMR) or on-screen	Allows for in EMR or on-screen editing and immediate signoff for potentially the quickest data creation process	Potentially least expensive, may have greater software and/or hardware cost, but lower staff and training costs
Back End Speech Recognition (BESR)	Text file automatically created outside of EMR and can be sent to medical transcriptionists	Transcription can be edited by medical transcriptionists and returned in real-time, or near real-time for signoff, moderately quick depending on process used	Low to moderately expensive depending on dictation vendor, may have lower software and hardware costs, but greater staff and training costs
Traditional Dictation Processing	Digital recording created outside of EMR, assigned to medical transcriptionists	Digital recording must be assigned and transcribed by medical transcriptionist, and then reviewed and signed off by the physician, potentially the slowest process	Most expensive, may require the lowest software and hardware costs, but the greatest staff and training costs
Front End Speech Recognition (FESR)	Text automatically created in electronic medical record (EMR) or on-screen	Allows for in EMR or on-screen editing and immediate signoff for potentially the quickest data creation process	Potentially least expensive, may have greater software and/or hardware cost, but lower staff and training costs

When considering which type of dictation software will best suit the needs of you and your practice, the Implementation Planning for Dictation Software segment can help you identify your needs. Dictation vendors will be able to assist you with comparing the different means of dictation and with the software and hardware requirements. Additional hardware accessories may also be supported, such as hand-held dictation devices which may have configurable shortcut buttons for use during patient encounters. If you require additional assistance on the types of dictation software available or with dictation vendors, please contact Doctors Technology Office.

Implementation Planning for Dictation Software

To have the greatest chance of successfully implementing dictation software at your practice, it is important to have a plan with clear goals. This segment will look at the change management which can be used to outline a successful transition to dictation.

Reason for Change

Express the importance of changing to dictation software for the practice and highlight how the benefits will outweigh the temporary inconveniences during the implementation process. The Benefits of Dictation segment has a lot of examples to draw from to support your reason to change to dictation software.

Build a Team

Identify the team members in your office that would benefit from implementation of dictation in your practice and gather their support; consider designating a champion to lead change and offer guidance to others. Try to identify who is going to be the most impacted from this (The other physicians you work with? Nursing staff? Your practice manager?). Work with these people as your project team to collaborate, and lead the change to dictation software; consider joint learning sessions to learn from one and other, or pay a vendor for group lessons.

Review with your vendor and your team on how dictation software will impact your practice, discuss ways to mitigate inconveniences and keep momentum going for the dictation software rollout.

Plan, Timeline, and Communication

Develop an implementation plan and timeline, and communicate the plan and timeline to your practice, dictation vendor, and EMR vendor. Keep your implementation plan realistic; if a comprehensive switch to dictation is out of reach, try a staged approach with phases or limited implementation objectives (such as using only for stable chronic disease reviews just with new patients). Make your goals achievable.

Create a timeline for how long you want to spend implementing the dictation software. Implementation times can vary between practices; work with your team to determine an achievable timeline.

Communicate your plan and timeline to your practice team, dictation vendor, and EMR vendor. This will ensure that everyone understands what it is you're working towards, why you are working towards it, and has a clear understanding of the time-frame around how long they can expect to be in the implementation phase.

If you would like help developing a timeline, contact Doctors Technology Office.

Create Milestones

Create milestones in your timeline for the implementation, short-term goals which can act as concrete objectives to work towards within the larger implementation plan. For example, setting milestones of scheduled training dates, a percent of regular consultations to be done by dictation in a certain time period, or a particular degree of EMR integration by a certain date. Keep the milestones incremental, and celebrate your successes.

Identify Potential Problems

Identify what problems you might encounter while implementing dictation software, so you can attempt to mitigate or prepare for those issues when/if they occur. Spend some time talking to your peers and EMR vendor on their experience with potential barriers; spend some time considering how that experience might apply to your practice and implementation.

Continuous Improvement

After implementing dictation software, continuous improvement in dictating skills and knowledge are an important next step in getting the most out of your dictation software. Treat continuous improvement as a smaller project, select achievable goals, timelines, and milestones. As examples of areas to target for continuous improvement, research has identified that using new features of the dictation software, such as templates, can improve the ease and speed of your dictation[xx]. As well, increasing the training and correcting of your dictation software recurrent speech recognition errors, avoiding mumbling[xxi], learning how to organize your dictation to be integrated into the flow of your patient visit, and dictating punctuation can improve the quality of your dictated documents and encounter notes[xxii].

Depending on what was offered by your dictation software vendor, additional training may be available from them to help you continuously improve with dictation.

Engaging with Dictation Software Vendors

Although it is possible to implement and learn dictation software by oneself, using a dictation software vendor can be an option to help optimize the adoption and efficiency of voice dictation. Understanding what you can expect from your dictation software vendor can help with setting set realistic and achievable goals, and help you have a successful dictation software implementation. Ask your dictation vendor about:

• How will they support your implementation plan and assist you in the process?

• How do their timelines align with your implementation plan?

• What are the upfront and ongoing costs?

• Can they provide you with references from other clinicians who have used their services?

• Do they have a history of successfully working with your current EMR vendor, and how well does the dictation software integrate with your EMR?

• Do they have a list of recommended hardware and software requirements?

• What will be included in your dictation training, will it be 1:1 or remotely?

• How many hours, sessions, and what kind of sessions they will provide for training?

• What is the cost of additional training after implementation?

• What does the vendor's ongoing support look like? How will you be supported to resolve issues or bugs?

• What is the process for enhancement requests? What is the turn-around time on enhancements?

• How frequently does the software manufacturer update their software? What is involved in updating the software, and how will the vendor support you when the software needs to be updated?

Checking with your EMR Vendor

Check with your EMR vendor or service provider for the preferred dictation software companies they have worked with in the past and if they support dictation, or if your EMR vendor offers dictation software as an additional service. Ask your EMR vendor if they have any references from other practices who have successfully implemented dictation software you could speak with.

Conclusion

Dictation is a useful tool which can help improve documentation of medical encounters. Ultimately, for some, implementing dictation may lead to improvement in patient care. The upfront cost of purchasing and implementing dictation software can be outweighed by the long-term savings. Please contact Doctors Technology Office if you require further assistance in planning your dictation software implementation, beginning continuous improvement, or engaging with dictation vendors.

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